



The children's foreign language anxiety scale: Reliability and validity

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Abstract

Foreign language anxiety (FLA) has been mainly associated with adult language learners. Although FLA forms a serious problem in the foreign language learning process for all learners, the effects of FLA on children have been mainly overlooked. The underlying reason is that there is a lack of an appropriate measurement tool for FLA among children. In addition, FLA studies have included mostly the adult learners into research. Therefore, the current study intends to present the tests of reliability and validity for the Children's Foreign Language Anxiety Scale (CFLAS) and to report on the reliability, validity and factor structure of the scale. Results show that CFLAS is a reliable and valid tool to measure the levels of FLA among children aged 7-12 who learn English as a foreign language (EFL) in the Turkish EFL context.

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Keywords: Foreign language anxiety; Children's Foreign Language Anxiety Scale; validity; reliability

1. Introduction

FLA is defined as a type of uneasiness and an anxious state of mind generally caused by the unique nature of the language learning process which includes various challenges for learners (McIntyre & Gardner, 1994). It is perceived as a considerable variable that has negative influences on the foreign language learning process (Aydin, 2008). Since the foreign language learning is a unique situation in that it addresses multiple skills (McIntyre & Gardner, 1994), FLA occurs during the learning process in various ways. For example, language learners may feel worried, frightened and anxious about responding to teachers in both oral and written tasks (Subasi, 2010). FLA may also cause the case that learners appreciate achievement that is based merely on test scores rather than taking the whole performance during the learning process into account. Another reason is that evaluation and comments of others on a learner's performance may also lead to FLA (Kitano, 2001). Lastly, communication apprehension that is defined as the inability to comprehend messages during communication and interaction with other speakers of the target language is experienced by learners in understanding

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others or being understood constitutes communication apprehension as a factor of FLA (Elaldi, 2016). To conclude, FLA is a considerable issue that is based on many factors that may affect the foreign language learning process profoundly; thus, a reliable and valid tool is vital for practitioners to understand the origins and nature of it and take precautions against it.

Foreign Language Classroom Anxiety Scale (FLCAS) is a popular anxiety-measuring tool for adult language learners developed by Horwitz (1986), and it has been tested for reliability and validity under many circumstances such as different cultural groups, settings, and ages. In addition, studies which tested FLCAS in terms of reliability and validity have found that the scale is reliable and valid (Aida, 1994; Paredes, & Muller-Alouf, 2000; Toth, 2008; Yaikhong, & Usaha, 2012). However, it is noteworthy to mention that the number of studies dealing with the impact of FLA on young language learners is quite limited (Aydin, 2013).

Results obtained from prior studies only provide a small fragment of insight over the issue of anxiety levels of young learners (Ay, 2010; Aydin, 2012; Chan & Wu, 2004). The reason behind the lack of data is simply because FLCAS mostly addresses adult learners in the sense of comprehension. In other words, it can be underlined that FLCAS can be a challenging tool for measuring anxiety levels of children for it is primarily designed for adult learners. That is why, considering the developmental and cognitive differences of young learners, FLCAS is insufficient to measure young learners' anxiety levels unless it is adjusted to their levels (Aydin et al., 2016c). In addition, the survey which was not specially designed for young learners might cause additional anxiety-related issues among young participants since they might feel lost trying to understand the expressions. Thus, it is sensible to claim that a scale specifically designed for children is necessary to be able to detect the source and the extent of anxiety among children.

The adaptation of the FLCAS among children was carried out in a study based on implementing FLCAS into the Turkish version along with testing its validity and reliability in the Turkish EFL setting. In the context of the study, after regarding the implementation of the FLCAS in related literature, Bas (2013) revealed a 30-item scale with the aim of figuring out elementary school children's FLA. After examining the scale for reliability and validity, the reliability was computed as 0.93 regarding Cronbach's Alpha and total variance was figured as 52.93%. Nevertheless, it was apparent that any items were not altered, simplified and reconstructed, which contradicts with the requirements of developing and adapting the scale for children.

In conclusion, several causes leading this study can be listed. First, in terms of FLA, children are generally ignored, since the area is predominantly associated with adult learners. Second, there is not any scale in related literature that was developed with the intention of measuring FLA among children learning a foreign language. Third, Horwitz' (1986) FLCAS to measure the level of anxiety among children was given preference that neglects children's psychological, cognitive along with social progress and properties. In other words, it is obvious that there is a gap in related literature considering scale adaptation and development regarding anxiety among children. Therefore, the study aims to conduct a study on the adaptation of an anxiety scale for measuring children's anxiety levels. The study, specifically, aims to provide preliminary results of the implementation of an anxiety scale that is adapted for children from the point of validity and reliability.

2. Method

2.1. Participants

The participants in the study were 470 children enrolled in primary and secondary schools in Balikesir, Turkey. The sample group consisted of 92 (19.6%) second graders, 66 (14.0%) third graders, 77 (16.4%) fourth graders, 110 (23.4%) fifth graders, 76 (16.2%) sixth graders and 49 (10.4%) seventh graders. Of the participants, 240 (51.1%) were girls and 230 (48.9%) were boys. Their mean age was 9.8 in the range of seven and 12. It should be noted that all of the students enrolled in public school.

2.2. Tool

The data collecting instrument consisted of a background questionnaire investigating age, gender and birth date and the FLCAS that involved 25 items. Each item in the scale included five facial expressions that ranged from one to five (1=very unhappy, 2=unhappy, 3=neither happy nor unhappy, 4=happy, 5=very happy), as seen in Figure 1.

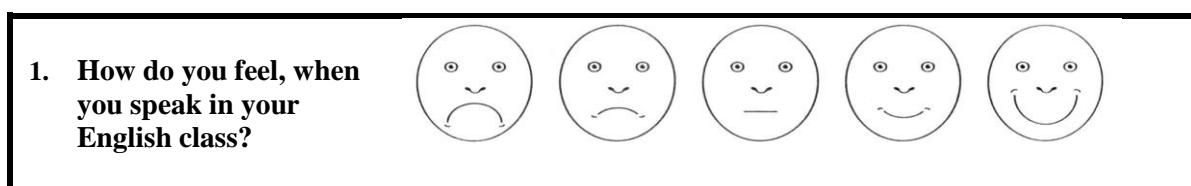


Figure 1. Sample item

2.3. Procedure

The study consisted of five main steps. (1) Translation and adaptation, (2) simplification and moderation, (3) pilot study, (4) administration and (5) statistical procedure. These steps were clarified in details below.

Step 1: Translation and adaptation of the scale into Turkish

The Foreign Language Classroom Anxiety Scale (FLCAS) designed and validated by Horwitz (1986) was translated from English to Turkish by five translators in blind sessions. Of the translators, one had a Ph.D. degree, three were MA students and one was a BA student in the field of English language teaching. Then, a panel was performed to compare and unify the translated versions of the scale into one. After three panel tours, they reached a satisfactory version regarding the semantic and conceptual equivalence.

The English version of the scale was administered to 85 EFL students enrolled in third and fourth grades in the Department of English Language Teaching of Balikesir University, Turkey. The sample group consisted of 63 (74.1%) female, whereas 22 (25.9%) were male students. Their age range was between 19 and 27 ($x=21.09$). They all were at an advanced level of English language proficiency. After four weeks, the Turkish version of the scale was administered to the same students. Both versions of the scale had internal consistency (in Cronbach's Alpha, .86 for the Turkish version and .77 for the English version) and construct validity (73.58 of the variance for the Turkish version and 67.19 of the variance for the English version). These values showed that there was equivalence between the English and Turkish versions of the scale in terms of validity and reliability (Aydin et al., 2016a).

Step 2: Simplification and moderation of the scale for children

In this step, the Turkish version of the scale was simplified and moderated for children. For this purpose, first, the panelists simplified the scale in accordance with linguistic and conceptual developments of the related age group in blind sessions. Then, in panels, they discussed each item and reached a consensus regarding intelligibility among children. Then, the drama expert performed several techniques such as interactional role-plays, process drama and individual, peer and group activities to see how each item was perceived by children. In the stage, 174 primary and elementary students at two state schools were used as participants. The participants' age range was between seven and 12. Then, the panelists examined the audio and visual recordings to restructure the scale in accordance with the participants' reactions to the items. Finally, the panelists restructured the scale in terms of the intelligibility of the scale.

Step 3: Pilot study

In the piloting process, the scale consisting of 33 items administered to 174 children by the drama expert using the techniques mentioned above. The sample group consisted of second, third, fourth, fifth, sixth and seventh graders in the age range of seven and 12. Their mean age was 9.7; of the participants, 85 (48.9%) were boys and 89 (51.1%) were girls. After a principal component analysis and the Varimax method were carried out, eight items were removed. The reason why those eight items were removed from the scale was that they did not seem related to other items in the scale, as can be seen in Table 2.

The results obtained from the pilot study showed a high level of internal consistency (.85 in Cronbach's Alpha and .85 in Cronbach's Alpha Based on Standardized Items) and construct validity (59.83% of the variance). In this process, a six-factor solution was identified. These factors were communication apprehension, fear of negative evaluation, test anxiety, fear of making mistakes, peer approval and course content. As this was the first examination of reliability analysis and factor solution, an additional examination of the factors' complexity in more diverse and larger samples seemed necessary (Aydin et al., 2016b).

Step 4: Administration

The 20-item version of the scale was administered to the participants in the spring semester of 2015 – 2016 academic year. This process was performed by the drama expert using the same drama techniques and procedure mentioned previously.

Step 5: Statistical procedure

The data collected were analyzed using the software SPSS. First of all, participants' grade and gender frequencies in percent were found. Then, their mean age score was computed. Second, Cronbach's Alpha was calculated to see the extent to which items in the scale represent internal consistency. Findings in relation to internal consistency were shown in the Results section. Third, an exploratory factor analysis was performed to see the extent to which the scale reflects the construct validity. For this purpose, a principal component analysis and the Varimax method were used. After this process, five items that were not functioning were removed from the scale, leaving 20 items in the scale.

3. Results

3.1. Descriptive data

Scores for the data set were between 27 and 96 in the range of 69, whereas the mean score was found to be 61.28. The standard deviation was 11.11, whereas the standard error value was calculated as 0.52.

3.2. Reliability

Values show that the reliability level of the CFLAS is acceptable. For the scale, the internal consistency was found to be .85 in Cronbach's Alpha. In addition, Cronbach's Alpha Based on Standardized Items was computed as .84. The values for the internal consistency were .84 for communication apprehension, .85 for fear of negative evaluation and .86 for test anxiety.

3.3. Validity

As noted previously, the CFLAS was analyzed by an explanatory factor analysis. During the analysis process, principal components with Varimax rotation were used. As seen in Table 1, factor loadings for exploratory factor analysis with Varimax rotation, the rotated factors explained 48.39% of the variance. In the scale, the first factor which explained 27.69% of variance, whereas the second factor explained 42.75% of variance. Last, the third factor explained 48.39% of variance.

Table 1. Factor Loadings for Exploratory Factor Analysis with Varimax Rotation (Total Variance Explained)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.53	27.69	27.70	5.53	27.69	27.70	4.73	23.64	23.64
2	3.01	15.07	42.74	3.01	15.07	42.76	2.99	14.92	38.58
3	1.12	5.63	48.39	1.12	5.63	48.40	1.97	9.81	48.40
4	.96	4.76	53.14						
5	.89	4.43	57.58						
6	.82	4.13	61.70						
7	.80	4.03	65.73						
8	.74	3.74	69.49						
9	.70	3.50	72.98						
10	.69	3.43	76.41						
11	.61	3.08	79.49						
12	.60	2.99	82.47						
13	.59	2.93	85.40						
14	.51	2.56	87.96						
15	.50	2.51	90.47						
16	.49	2.40	92.87						

17	.40	2.01	94.89
18	.39	1.90	96.79
19	.34	1.74	98.52
20	.30	1.48	100.00

Extraction Method: Principal Component Analysis.

As can be seen in Figure 2 and Table 2 presented below, scree plot and rotated component matrix indicate that 20 items loaded on three factors that were determined as communication apprehension, fear of negative evaluation and test anxiety. In the scale, 10 items loaded on the first factor, whereas seven items loaded on the second factor. Last, three items in the scale loaded on the third factor. As a result, scree test and the amount of variance explained indicated that the CFLAS obtained an optimal factor solution.

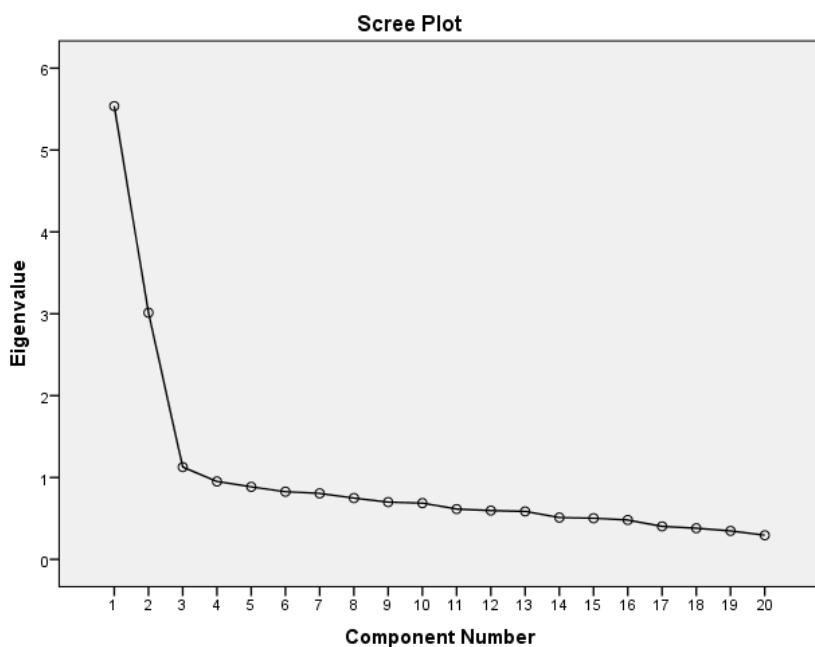


Figure 2. Component numbers and eigenvalue of the CFLAS

Table 2. Rotated component matrix

Items	Component		
	1	2	3
4	.79	.10	.11
5	.76	.09	.10
1	.76	.11	.18
2	.72	.02	.10
3	.71	.03	.23
6	.71	-.02	.09
8	.63	.20	.28
7	.52	.00	.29
17	.51	.03	.36
19	.46	.41	-.20
21	.01	.70	-.06

12	.01	.70	.10
11	-.11	.63	-.10
25	.10	.63	.03
20	.04	.62	.10
22	.18	.58	-.11
23	.13	.48	-.24
14	.20	-.12	.72
13	.27	-.03	.68
15	.32	-.06	.64

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

4. Conclusions

This study aimed to develop, adapt and examine a scale to measure foreign language anxiety among children regarding validity and reliability. The first conclusion obtained from the study is that the CLFAS has a high level of internal consistency. The second conclusion is that the scale results in a three-factor solution based on communication apprehension, fear of negative evaluation and test anxiety among children. The conclusions provide evidence of the potential use of the CFLAS as an appropriate measurement tool for foreign language anxiety experienced by children in the age range of 7 and 12 in the Turkish EFL learning context.

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Appendix A. Items in the CFLAS

Turkish	English
Daha fazla İngilizce dersine girsene hissedersin?	How do you feel if you have more English lessons?
İngilizce dersinin sınavlarında ne hissediyorsun?	How do you feel when you have English examinations?
İngilizce dersine girince ne hissediyorsun?	How do you feel when you attend English class?
Derste İngilizce konuşurken ne hissediyorsun?	How do you feel while you are speaking English in the class?

İngilizce derslerinde öğretmen sana seslendiğinde ne hissediyorsun?	How you feel when your teacher calls you in your English classes?
İngilizce dersinde sana söz hakkı verildiğinde ne hissediyorsun?	How do you feel when you are given a chance to speak in your English class?
İngilizce konuşmak için öğrenmen gereken çok kural olduğunu gördüğünde ne hissediyorsun?	How do you feel when you see there are many rules to learn to speak English?
Bir İngiliz'le konuşsaydın ne hissederdin?	How would you feel if you spoke to a native speaker of English?
Arkadaşlarının önünde İngilizce konuşurken ne hissediyorsun?	How do you feel while you are speaking English in front of your classmates?
İngilizce derslerinde hazırlık yapmadan konuşman gerekince ne hissederdin?	How do you feel when you have to speak without any preparation in English classes?
İngilizce derslerinde bildiğin şeyleri unutunca ne hissediyorsun?	How do you feel when you forget things you know in your English class?
İngilizce dersinde hata yapınca ne hissediyorsun?	How do you feel when you make mistakes in English class?
İngilizce derslerinde başarısız olursan ne hissederdin?	How do you feel if you fail in English classes?
Öğretmenin düzelttiği şeyi anlamadığında ne hissediyorsun?	How do you feel when you don't understand what the teacher is correcting?
Öğretmenin İngilizce söylediğini anlamadığında ne hissediyorsun?	How do you feel when you don't understand what the teacher is saying in English?
İngilizce öğretmenin çalışmadığın yerden soru sorunca ne hissederdin?	How do you feel when the English teacher asks a question which you haven't prepared in advance?
İngilizce konuşurken diğer öğrenciler sana gülecek olursa ne hissederdin?	How do you feel if other students laugh at you while you are speaking English?
İngilizce dersine çok iyi hazırlanınca ne hissediyorsun?	How do you feel when you are well prepared for English class?
İngilizce derslerinde parmak kaldırığında ne hissediyorsun?	How do you feel when you volunteer answers in English classes?
İngilizce dersinin sınavına çok çalıştığında ne hissediyorsun?	How do you feel when you are well prepared for an English examination?

Note: Statements given in English is not for use for measurement but to inform international readers about English equivalences of the items in the scale.

Çocuklarda yabancı dil kaygı ölçeği: Geçerlilik ve güvenilirlik

Öz

Yabancı dil kaygısı, çoğunlukla yetişkin dil öğrencileri ile ilişkilendirilmiştir. Yabancı dil kaygısının, tüm yabancı dil öğrencileri için öğrenme sürecindeki ciddi bir sorun oluşturmamasına rağmen, kaygının çocuklar üzerindeki etkileri yeterince dikkate alınmamıştır. Bunun altında yatan nedenlerden birisi, çocuklar arasında yabancı dil kaygısı ölçmek için uygun bir ölçme aracının eksikliğidir. Ek olarak, çalışmalar, çoğunlukla yetişkinler üzerine odaklanmaktadır. Bu nedenle mevcut çalışma, Çocuklarda Yabancı Dil Kaygı Ölçeği kullanılarak yapılan ölçümlere dayalı olarak; ölçeğin geçerlilik, güvenilirlik ve faktör yapısı hakkında bulgulara erişmeyi amaçlamaktadır. Sonuçlar, Çocuklarda Yabancı Dil Kaygı Ölçeğinin ülkemiz yabancı dil öğrenme sürecinde olan 7-12 yaş grubundaki çocuklar arasındaki olası kaygı düzeylerini ölçmek için geçerli ve güvenilir bir ölçme aracı olduğunu göstermektedir.

Anahtar sözcükler: Yabancı dil kaygısı; Çocuklarda Yabancı Dil Kaygı Ölçeği; geçerlilik; güvenilirlik

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